IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Filed: **November 3, 1998**
Group Art Unit: **2668**
Examiner: **Tran**
Atty Docket No.: **Warwick 9**
Our Ref.: **73-809**

In re Patent Application of:

WARWICK

Title: **DIGITAL AUDIO BROADCAST SYSTEM WITH LOCAL INFORMATION**

March 30, 2006

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicant submits herewith the following Appeal Brief in triplicate as required by 37 C.F.R. § 1.192.

(1) REAL PARTY IN INTEREST

The real party in interest is Agere Systems Inc.

(2) RELATED APPEALS AND INTERFERENCES

The Applicant and their legal representatives and assignee are not aware of any other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the appending appeal.

(3) STATUS OF THE CLAIMS

Claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 remain pending in the application. Claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 stand rejected.

(4) STATUS OF ANY AMENDMENT FILED SUBSEQUENT TO FINAL REJECTION

The Applicant filed an Amendment on October 27, 2005 after the Final rejection issued July 12, 2005. The Examiner indicated in the Advisory Action issued December 15, 2005 that the Applicant's Amendment filed October 27, 2005 was entered.

(5) SUMMARY OF THE INVENTION

The present invention is directed toward a system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel. A plurality of local broadcast identifying codes are each associated with a respective one of the plurality of local content source information streams. A formatting module is adapted to insert the plurality of local broadcast identifying codes into respective ones of the plurality of local content source information streams. A transmitter is adapted to transmit data packets each containing at least one of the plurality of local broadcast identifying codes and a portion of one of the plurality of local content source information streams.

The present invention allows the transmission of information relevant to particular locations without wasting valuable channels, and without the potential for causing confusion to users receiving local information intended for access by receivers in another locality.

(6) CONCISE STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

(A) Whether claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 are obvious under 35 U.S.C. §103(a) over U.S. Patent No. 6,160,585 to Schmidt et al. ("Schmidt") in view of U.S. Patent No. 6,040,867 to Bando et al. ("Bando").

(7) WHETHER THE CLAIMS STAND OR FALL TOGETHER

Group I: Claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 stand or fall together because each includes the following distinctive features:

(1) transmitting a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel;

(2) use of a plurality of local broadcast identifying codes each relating to a local **GEOGRAPHIC** area within a general broadcast area serviced by the system; and

(3) a **packetized**, digital **audio** broadcast (**DAB**) system, including a unique local identifying code in a header of **each** data **packet** relating to each local digital packetized audio information source.

(8) ARGUMENTS WITH RESPECT TO THE ISSUES PRESENTED FOR REVIEW

(A) Claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 are not obvious under 35 U.S.C. §103(a) over Schmidt in view of Kostreski.

All rejected claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 require a system and method for transmitting a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel.

The Examiner agreed that "Schmidt fails to teach a digital radio transmitter and a packetizing of the information stream, wherein at least one of the plurality of local broadcast information codes is contained in a header of each data packet transmitted by the transmitter." (See Office Action July 12, 2005 at page 3)

Schmidt teaches a video system that multiplexes different broadcasts into **MULTIPLE, DIFFERENT channels**, the TV receiver selecting a desired channel for reception.

Bondo teaches a TV receiver as well, Bondo's multiplexing VIDEO, AUDIO and DATA into a given channel.

A theoretical combination of Schmidt and Bondo would, at best, result in a VIDEO TV receiver that uses MULTIPLE channels, each channel transmitting VIDEO, AUDIO and DATA.

Raising the issue for the first time, the Examiner stated in the Advisory Action dated December 15, 2005 that the recited a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel has NOT been given patentable weight since the recitation allegedly occurs only in the preamble. However, the Examiner acknowledges that the preamble IS given weight when the body of the claim depends on the preamble for completeness.

The body of claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 DO refer back to their respective preambles for completeness. For Example, the body of claims 1, 4-7, 9 and 10 recite "a general broadcast area serviced by said system" the "system" recited in the preamble to transmitting a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel. The body of claims 11, 12, 14, 15, 17-19, 21, 22 and 24 recite "transmitting a digital radio signal over said single channel", the "single channel" being referred to in the preamble as part of a method and system for transmitting a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel.

For example, the body of claims 25, 27 and 28 recite "local audio content source", with the preamble reciting the type of audio the recited local content source is combined with, i.e., an "information stream combiner for a single channel of a digital audio broadcast transmitter". The body of claims 29 and 31-33 recite monitoring said single channel" with the preamble reciting "receiving one of a plurality of local audio content source information streams in a single channel of a digital audio broadcast system".

Claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 DO recite a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel, contrary to the Examiner allegation. Thus, the Examiner has ACKNOWLEDGED that the Examiner has NOT fully considered ALL of the limitations of claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29

and 31-33, and therefore the rejections are improper and should be WITHDRAWN.

The cited prior art fails to disclose, teach or suggest transmission of a **plurality** of localized information streams within a **SINGLE** general digital audio broadcast channel, as recited by claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33. Thus, for these reasons alone, claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 are patentable over the prior art of record.

Local Identifying Information is **GEOGRAPHICALLY** Related

Furthermore, claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 variously recite use of a plurality of local broadcast identifying codes each relating to a local **GEOGRAPHIC** area within a general broadcast area serviced by the system.

Schmidt teaches accomplishment of local area broadcasting based on the 'region from which a local TV station or cable system transmits their signals.' Thus, according to Schmidt, local broadcasts are transmitted ONLY LOCALLY. Local broadcasts are NOT broadcast to a general broadcast area.

Bando teaches inclusion of VIDEO, AUDIO and DATA within each transmitted channel. Bando fails to teach ANY geographically related information.

For at least THESE reasons, claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 are patentable over the prior art of record.

Claims Relate to a Digital Audio Broadcast (**DAB**) System, NOT video

Moreover, claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 variously recite a **packetized**, digital **audio** broadcast (**DAB**) system, including a unique local identifying code in a header of **each** data **packet** relating to each local digital packetized audio information source.

A digital audio broadcast (**DAB**) system is a specialized system for broadcasting DIGITAL AUDIO information to a plurality of receivers. A **DAB** system's topology is similar to conventional radio in that there is a centralized

transmitter transmitting to a plurality of receivers. **NONE** of the prior art applied by the examiner relates to the unique problems associated with a **DAB** system.

Both cited references, Schmidt and Bando, are directed toward video transmissions, with no disclosure or suggestion for application to a **DAB** system.

In particular, Schmidt teaches a conventional **streaming video** transmission system wherein video is passed through an analog multiplexer 14 (Fig. 1) that combines two **streaming video** data signals into a single **streaming video** data signal. (Schmidt, col. 2, lines 7-10) According to Schmidt, normal or baseline video is **streamed** continuously by all receivers, while the **streaming video** signal for commercials may be multiplexed with the baseline **streaming video** signal. (Schmidt, col. 2, lines 19-23; 37-40; 51)

The present invention claims a **packetized** local **DIGITAL BROADCAST AUDIO (DAB)** system—NOT video!

It is respectfully submitted that a person of ordinary skill in the art would NOT have looked to Schmidt in combination with multiple other references cited by the Examiner to build improved packetized audio techniques as claimed.

The Examiner cites Schmidt as a primary reference alleging, inter alia, that it teaches use of a plurality of local broadcast identifying codes each associated with a respective one of the plurality of local content source information streams (e.g., a level address discrimination which bases upon the geographical location). (See Office Action July 12, 2005 at page 2)

The use of unique local identifying codes are an important part of the present invention, as is their placement in a header of each data packet relating to each local digital packetized audio information source. The Examiner provides absolutely no reference to any particular feature in Schmidt that discloses unique local identifying codes as claimed. Rather, the Examiner simply states a generality that is somewhat unintelligible, i.e., "(e.g. a level address discrimination which bases upon the geographical location)". Whatever the Examiner is referring to, it certainly isn't a unique local identifying code that's placed in a header of each data packet, as claimed by all pending claims of the present invention.

Nevertheless, the Examiner agrees that "Schmidt **fails to teach** a **digital** radio transmitter and **packetizing** the information stream, wherein at least one of the plurality of **local broadcast identifying codes is contained in a header of each data packet**". (See Office Action July 12, 2005 at page 3)

To cure the MANY and IMPORTANT deficiencies of the base reference of Schmidt, the Examiner cites Bondo for allegedly teaching a "baseband ***VIDEO*** signal to packet (col. 3, lines 9-17), which contains identifying codes in header of each data packet (col. 3, lines 22-24)." (See Office Action July 12, 2005 at page 3)(emphasis added)

By the Examiner's own interpretation, Schmidt and Bondo each teach a VIDEO signal.

The present invention relates not only to an AUDIO signal, but to a very specific AUDIO format called DIGITAL AUDIO BROADCAST (DAB).

A digital signal is NOT an audio signal, and CERTAINLY not the very specific format of a DIGITAL AUDIO BROADCAST (DAB) signal.

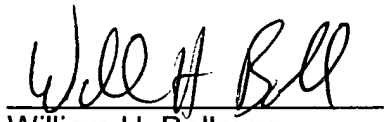
Neither Schmidt nor Bondo, either alone or in theoretical combination, even if proper, disclose, teach or suggest a DIGITAL AUDIO BROADCAST (DAB) system as claimed by claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33.

It is respectfully submitted that not only does this rejection fail on its face, and thus is improper, but also in light of the above comments its clear that Schmidt in view of Bando does not render obvious any of claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33. Thus, the rejection of claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 under 35 U.S.C. § 103(a) is improper and should be reversed.

CONCLUSION

For all the reasons set forth above, the rejections of claims 1, 4-7, 9-12, 14, 15, 17-19, 21, 22, 24, 25, 27-29 and 31-33 are improper and should be reversed. The Applicant therefore respectfully requests that this Appeal be granted and that the rejections of the claims be reversed.

Respectfully submitted,



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APPENDIX

CLAIMS INVOLVED IN THE APPEAL

1. A system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel, comprising:

at least one local audio content source to provide a plurality of local content source information streams associated with a plurality of local broadcast identifying codes, each of said plurality of local broadcast identifying codes each relating to a local geographic area within a general broadcast area serviced by said system;

a formatting module adapted to insert said plurality of local broadcast identifying codes into respective ones of said plurality of local content source information streams; and

a digital radio transmitter adapted to transmit data packets each containing at least one of said plurality of local broadcast identifying codes and at least a portion of one of said plurality of local content source information streams;

wherein at least one of said plurality of local broadcast identifying codes is contained in a header of each data packet transmitted by said transmitter.

2. (canceled)

3. (canceled)

4. The system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel according to claim 1, wherein:

said transmitter transmits said data packets in a time division multiplex scheme.

6. The system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel according to claim 1, wherein:

said plurality of local broadcast identifying codes each relate to a postal code.

7. The system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel according to claim 1, wherein:

said plurality of local broadcast identifying codes each relate to a zip code.

8. (canceled)

9. The system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel according to claim 1, wherein:

said system for transmitting is included within a satellite broadcast system.

10. The system for transmitting a plurality of localized information streams within a single general digital audio broadcast channel according to claim 1, wherein:

said system for transmitting is included within a wired cable broadcast system.

11. A method for transmitting a plurality of local broadcast information streams within a single channel, comprising:

associating at least one of a plurality of unique local broadcast identifying codes with each of a plurality of local content information streams, each of said unique local broadcast identifying codes being associated with a local geographic area within a general broadcast area; and

transmitting a digital radio signal over said single channel, said digital radio signal comprising a plurality of data packets each containing one of said plurality of content information streams and an associated one of said plurality of unique local broadcast identifying codes;

wherein at least one of said plurality of unique local broadcast identifying codes are included in respective header portions of said data packets.

12. The method for transmitting a plurality of local broadcast information streams within a single channel according to claim 11, wherein:

said local content information streams are each a digital audio broadcast information stream.

13. (canceled)

14. The method for transmitting a plurality of local broadcast information streams within a single channel according to claim 13, wherein:

said general broadcast area is nationwide.

15. The method for transmitting a plurality of local broadcast information streams within a single channel according to claim 11, further comprising:

formatting data packets for each of said plurality of local content information streams.

16. (canceled)

17. The method for transmitting a plurality of local broadcast information streams within a single channel according to claim 11, wherein:

said common channel is a digital audio broadcast channel.

18. Apparatus for transmitting a plurality of local broadcast information streams within a single channel, comprising:

means for associating at least one of a plurality of unique local broadcast identifying codes with each of a plurality of local content information streams, said means for associating associates each of said unique local broadcast identifying codes with a local geographic area within a general broadcast area; and

means for transmitting a digital radio signal over said single channel, said digital radio signal comprising a plurality of data packets each containing one of said plurality of content information streams and an associated one of said plurality of unique local broadcast identifying codes;

wherein said means for transmitting includes means for including at least one of said plurality of unique local broadcast identifying codes in respective header portions of said data packets.

19. The apparatus for transmitting a plurality of local broadcast information streams within a single channel according to claim 18, wherein:

said local content information streams are each a digital audio broadcast information stream.

20. (canceled)

21. The apparatus for transmitting a plurality of local broadcast information streams within a single channel according to claim 20, wherein:

said general broadcast area is nationwide.

22. The apparatus for transmitting a plurality of local broadcast information streams within a single channel according to claim 18, further comprising:

means for formatting data packets for each of said plurality of local content information streams.

23. (canceled)

24. The apparatus for transmitting a plurality of local broadcast information streams within a single channel according to claim 18, wherein:

said common channel is a digital audio broadcast channel.

25. An information stream combiner for a single channel of a digital audio broadcast transmitter, comprising:

a local audio content source;

a module adapted to packetize said local audio content source;

a local broadcast identifying code storage element; and

a processor adapted to insert a local identifying code relating to a local geographic area within a general broadcast area, said local identifying code being obtained from said local broadcast identifying code storage element into each data packet containing at least a portion of said local audio content source;

wherein said processor is further adapted to insert said local identifying code into a header portion of each data packet.

26. (canceled)

27. The information stream combiner for a single channel of a digital audio broadcast transmitter according to claim 25, wherein:

said local identifying code is a zip code.

28. The information stream combiner for a single channel of a digital audio broadcast transmitter according to claim 25, further comprising:

an audio encoder to compress a transmitted data rate with respect to said local audio content source.

29. A method of receiving one of a plurality of local audio content source information streams in a single channel of a digital audio broadcast system, comprising:

monitoring said single channel for a local audio transmission associated with a geographic location of a receiver;

playing back said local audio content source information stream if a monitored local audio transmission is associated with said geographic location of said receiver;

storing a unique local broadcast identifying code associated with said geographic location of said receiver;

said monitoring including a search of each detected data packet for said unique local broadcast identifying code contained therein corresponding to a transmission associated with said geographic location of said receiver.

30. (canceled)

31. The method of receiving one of a plurality of local audio content source information streams in a single channel of a digital audio broadcast system according to claim 29, wherein:

said unique local broadcast identifying code is a zip code.

32. The method of receiving one of a plurality of local audio content source information streams in a single channel of a digital audio broadcast system according to claim 29, further comprising:

preempting reception of a general broadcast during reception of transmissions relating to said geographic location of said receiver.

33. The method of receiving one of a plurality of local audio content source information streams in a single channel of a digital audio broadcast system according to claim 29, further comprising:

superimposing transmissions associated with said geographic location of said receiver with transmissions relating to a general broadcast.